

**§ 160.060-5 Construction—standard vests.**

(a) *General.* This specification covers buoyant vests which essentially consist of a fabric envelope in which are enclosed inserts of buoyant material arranged and distributed so as to provide the flotation characteristics and buoyancy required to hold the wearer in an upright or slightly backward position with head and face out of water. The buoyant vests are also fitted with straps and hardware to provide for proper adjustment and close and comfortable fit to the bodies of various size wearers.

(b) *Envelope.* The envelope or cover shall be made of three pieces. Two pieces of fabric shall be cut to the pattern shown on Dwg. No. 160.060-1, Sheet 1 for the adult size, and Sheets 2 and 3 for child sizes, and joined together with a third piece which forms a 2¼" finished gusset strip all around. Reinforcing strips of the same material as the envelope shall be stitched to the inside of the front piece of the envelope in way of the strap attachments as shown by the drawings.

(c) *Buoyant inserts.* The unicellular plastic foam buoyant inserts shall be cut and formed as shown on Dwg. No. 160.060-1, Sheets 4, 5, and 6 for the adult, child medium, and child small sizes, respectively.

(d) *Tie tapes, body straps, and hardware.* The tie tapes, body straps, and hardware shall be arranged as shown on the drawings and attached to the envelope with the seams and stitching indicated.

(e) *Stitching.* All stitching shall be short lock stitch conforming to Stitch Type 301 of Federal Standard No. 751, and there shall be not less than 7 nor more than 9 stitches to the inch.

(f) *Workmanship.* Buoyant vests shall be of first-class workmanship and shall be free from any defects materially affecting their appearance or serviceability.

[CGFR 65-37, 30 FR 11590, Sept. 10, 1965, as amended by CGD 72-163R, 38 FR 8122, Mar. 28, 1973]

**§ 160.060-6 Construction—nonstandard vests.**

(a) *General.* The construction methods used for a nonstandard buoyant

vest must be equivalent to the requirements in § 160.060-5 for standard vests and also meet the requirements specified in this section.

(b) *Sizes.* Each nonstandard vest must contain the following volume of unicellular polyethylene foam buoyant material, determined by the displacement method:

(1) Five hundred cubic inches or more for the adult size, for persons weighing over 90 pounds.

(2) Three hundred and fifty cubic inches or more for a child medium size, for children weighing from 50 to 90 pounds.

(3) Two hundred and twenty-five cubic inches or more for children weighing less than 50 pounds.

(c) *Arrangement of buoyant material.* The buoyant material in a nonstandard vest must:

(1) Be arranged to hold the wearer in an upright or backward position with head and face out of water;

(2) Have no tendency to turn the wearer face downward in the water; and

(3) Be arranged so that 70 to 75 percent of the total is located in the front of the vest.

(d) *Neck opening.* Each cloth covered nonstandard vest must have at the neck opening:

(1) A gusset; or

(2) Reinforcing tape.

(e) *Adjustment, fit, and donning.* Each nonstandard vest must be made with adjustments to:

(1) Fit a range of wearers for the type designed; and

(2) Facilitate donning time for an uninitiated person.

[CGD 72-163R, 38 FR 8122, Mar. 28, 1973]

**§ 160.060-7 Inspections and tests—standard and nonstandard vests.<sup>1</sup>**

(a) *General.* Manufacturers of listed and labeled buoyant vests shall—

(1) Maintain quality control of the materials used, the manufacturing methods, and the finished product to meet the applicable requirements of

<sup>1</sup>The manufacturer of a personal flotation device must meet 33 CFR 181.701 through 33 CFR 181.705 which require an instruction pamphlet for each device that is sold or offered for sale for use on recreational boats.

this subpart by conducting sufficient inspections and tests of representative samples and components produced;

(2) Make available to the recognized laboratory inspector and the Coast Guard inspector, upon request, records of tests conducted by the manufacturer and records of materials used during production of the device, including affidavits by suppliers; and

(3) Permit any examination, inspection and test required by the recognized laboratory or the Coast Guard for a produced listed and labeled device, either at the place of manufacture or some other location.

(b) *Lot size and sampling.* (1) A lot shall consist of 500 buoyant vests or fewer;

(2) A new lot begins after any change or modification in materials used or manufacturing methods employed;

(3) The manufacturer of the buoyant vests shall notify the recognized laboratory when a lot is ready for inspection;

(4) The manufacturer shall select samples in accordance with the requirements in Table 160.060-7(b)(4) from each lot of buoyant vests to be tested for buoyancy in accordance with paragraph (e) of this section.

TABLE 160.060-7(B)(4)—SAMPLE FOR BUOYANCY TESTS

Lot size	Number of vests in sample
100 and under .....	1
101 to 200 .....	2
201 to 300 .....	3
301 to 500 .....	4

(5) If a sample vest fails the buoyancy test, the sample from the next succeeding lot must consist of 10 specimen vests or more to be tested for buoyancy in accordance with paragraph (e) of this section.

(c) *Additional compliance tests.* An inspector from the recognized laboratory or Coast Guard may conduct an examination, test and inspection of a buoyant device that is obtained from the manufacturer or through commercial channels to determine the suitability of the device for listing and labeling, or to determine its conformance to applicable requirements.

(d) *Test facilities.* The manufacturer shall admit the laboratory inspector and the Coast Guard inspector to any part of the premises at the place of manufacture of a listed and labeled device to—

(1) Examine, inspect, or test a sample of a part or a material that is included in the construction of the device; and

(2) Conduct any examination, inspection, or test in a suitable place and with appropriate apparatus provided by the manufacturer.

(e) *Buoyancy*—(1) *Buoyancy test method.* Remove the buoyant inserts from the vests. Securely attach the spring scale in a position directly over the test tank. Suspend the weighted wire basket from the scale in such a manner that the basket can be weighed while it is completely under water. In order to measure the actual buoyancy provided by the inserts, the underwater weight of the empty basket should exceed the buoyancy of the inserts. To obtain the buoyancy of the inserts, proceed as follows:

(i) Weigh the empty wire basket under water.

(ii) Place the inserts inside the basket and submerge it so that the top of the basket is at least 2 inches below the surface of the water. Allow the inserts to remain submerged for 24 hours. The tank shall be locked or sealed during this 24-hour submergence period. It is important that after the inserts have once been submerged they shall remain submerged for the duration of the test, and at no time during the course of the test shall they be removed from the tank or otherwise exposed to air.

(iii) After the 24-hour submergence period, unlock or unseal the tank and weigh the wire basket with the inserts inside while both are still under water.

(iv) The buoyancy is computed as paragraph (e)(1)(i) of this section minus paragraph (e)(1)(iii) of this section.

(2) *Buoyancy required.* The buoyant inserts from adult size buoyant vests shall provide not less than 15½ pounds of buoyancy in fresh water; the inserts from the child medium size buoyant vests shall provide not less than 11 pounds buoyancy; and the inserts from the child small size buoyant vests shall provide not less than 7 pounds buoyancy.

(f) *Body strap test.* The complete body strap assembly, including hardware shall be tested for strength by attaching the dee ring to a suitable support such that the assembly hangs vertically its full length. A weight as specified in § 160.060-3(d) shall be attached to the other end on the snap hook for 10 minutes. The specified weight shall not break or excessively distort the body strap assembly.

(g) *Additional approval tests for non-standard vests.* Tests in addition to those required by this section may be conducted by the inspector for a non-standard vest to determine performance equivalence to a standard vest. Such additional tests may include determining performance in water, suitability of materials, donning time, ease of adjustment, and similar equivalency tests. Costs for any additional tests must be assumed by the manufacturer.

[CGFR 65-37, 30 FR 11590, Sept. 10, 1965, as amended by CGD 72-90R, 37 FR 10839, May 31, 1972; CGD 72-163R, 38 FR 8122, Mar. 28, 1973; CGD 75-008, 43 FR 9772, Mar. 9, 1978]

**§ 160.060-8 Marking.**

(a) Each buoyant vest must have the following information clearly marked in waterproof lettering:

Type II Personal Flotation Device.  
Inspected and tested in accordance with U.S. Coast Guard regulations.  
Polyethylene foam buoyant material provides a minimum buoyant force of (15½ lb., 11 lb., or 7 lb.).  
Dry out thoroughly when wet.  
Approved for use on all recreational boats and on uninspected commercial vessels less than 40 feet in length not carrying passengers for hire by persons weighing (more than 90 lb., 50 to 90 lb., or less than 50 lb.).  
U.S. Coast Guard Approval No. 160.060/(assigned manufacturer's No.)/(Revision No.); (Model No.).  
(Name and address of manufacturer or distributor).  
(Lot No.).

(b) *Waterproof marking.* Marking of buoyant vests shall be sufficiently waterproof so that after 72 hours submergence in water it will withstand vigorous rubbing by hand while wet without printed matter becoming illegible.

[CGD 72-163R, 38 FR 8122, Mar. 28, 1973, as amended by CGD 75-008, 43 FR 9771, Mar. 9, 1978]

**§ 160.060-9 Recognized laboratory.**

(a) A manufacturer seeking Coast Guard approval of a product under this subpart shall follow the approval procedures of subpart 159.005 of this chapter, and shall apply for approval directly to a recognized independent laboratory. The following laboratories are recognized under § 159.010-7 of this part, to perform testing and approval functions under this subpart:

Underwriters Laboratories, 12 Laboratory Drive, P.O. Box 13995, Research Triangle Park, NC 27709-3995, (919) 549-1400.

(b) Production oversight must be performed by the same laboratory that performs the approval tests unless, as determined by the Commandant, the employees of the laboratory performing production oversight receive training and support equal to that of the laboratory that performed the approval testing.

[CGD 93-055, 61 FR 13930, Mar. 28, 1996]

**Subpart 160.061—Fishing Tackle Kits, Emergency, for Merchant Vessels**

SOURCE: CGFR 65-9, 30 FR 11483, Sept. 8, 1965, unless otherwise noted.

**§ 160.061-1 Applicable specifications.**

(a) The following specifications, of the issue in effect on the date emergency fishing tackle kits are manufactured, form a part of this subpart:

(1) Federal specifications:

QQ-I-706—Iron and steel; sheet, tinned (tin plate).  
QQ-W-423—Wire, steel, corrosion-resisting  
HH-P-91—Packing, fiber, hard sheet.  
CCC-F-451—Flannel, canton.

(2) Military specifications:

MIL-H-2846—Hooks, fish, steel.  
MIL-B-1418—Blades, razor, safety.  
MIL-A-140—Adhesive, water-resistant, W.P. barrier-material.

(b) Copies of the specifications referred to in this section shall be kept on file by the manufacturer, together with the approved plans, if any, and the certificate of approval.

(1) The Federal Specifications may be purchased from the Business Service Center, General Services Administration, Washington, DC 20407.